

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A portable multi-functional electronic communication and medical diagnostic device operable as one or more of a cellular phone, pager, and beeper, comprising:

a vibratory component for generating vibration, the vibratory component being adapted to generate vibration in a first mode in response to a remote wireless signal ~~when the device is operated as a portable electronic communication device comprising one or more of a cellular phone, pager, and beeper~~; the vibratory component being further adapted to generate ~~and display~~ quantified vibration in a second mode at one or more magnitudes and one or more frequencies for use in a medical diagnosis;

a mode selector for selecting between the first mode of vibration and the second mode of vibration;

a display for indicating one or more of the magnitude of vibration and the frequency of vibration being generated by the vibratory component in the second mode.

2. (Canceled)

3. (Canceled)

4. (Currently amended) The device of claim 1, further comprising a selector for selecting the one or more magnitudes of vibration in the second mode ~~wherein the device functions as a probe for detecting neuropathy in a subject.~~

5. (Currently amended) The device of claim 4 ~~[[1]]~~, wherein the component generates vibration of a fixed magnitude in the second mode.

6. (Currently amended) The device of claim 4 ~~[[1]]~~, wherein the component generates a plurality of sets of vibration each of a fixed magnitude in the second mode.

7. (Currently amended) The device of claim 4 ~~[[1]]~~, wherein the component generates vibration of a variable magnitude in the second mode.

8. (Previously presented) The device of claim 7, wherein the magnitude is variable in a linear, curvilinear, or step-like manner.

9. (Currently amended) The device of claim 55 ~~[[1]]~~, wherein the component generates vibration at a fixed frequency in the second mode.

10. (Currently amended) The device of claim 55 ~~[[1]]~~, wherein the component generates a plurality of sets of vibration each at a fixed frequency in the second mode.

11. (Currently amended) The device of claim 55 ~~[[1]]~~, wherein the component generates vibration at a variable frequency in the second mode.

12. (Currently amended) The device of claim 1 ~~[[4]]~~, wherein the device probe can be used in the second mode to determine one or more of a vibration perception threshold, a vibration disappearance threshold, and a vibration threshold, the device further comprising an audio or visual display to indicate one or more of the vibration perception threshold, the vibration disappearance threshold, and the vibration threshold.

13. (Previously presented) The device of claim 12, further comprising at least one component for storing and/or processing data including one or more of the vibration perception threshold, the vibration disappearance threshold, and the vibration threshold.

14. (Currently amended) A portable multi-functional electronic communication and medical diagnostic device, comprising:

a vibratory component for generating vibration in first and second modes, the vibratory component being adapted to generate vibration at a preprogrammed magnitude and

frequency in the first mode, the component being adapted to generate and display quantified vibration at one or more of a selected magnitude and a selected frequency in the second mode; and

a selector for selecting one or the other of said first and second modes;

a probe from transmitting vibration from the vibratory component to a subject; and

a display for indicating one or more of the magnitude of vibration and the frequency of vibration in the second mode;

wherein in the first mode the device functions as a portable electronic device comprising one or more of a cellular phone, pager, and beeper; and

wherein in the second mode the device operates to detect the presence or absence of ~~as a probe for detecting neuropathy~~ in a subject.

15. (Canceled)

16. (Canceled)

17. (Currently amended) The device of claim 14, wherein the selected magnitude comprises said device in said second mode generates vibration of a fixed magnitude.

18. (Currently amended) The device of claim 17, wherein the selected magnitude comprises said device in said second mode generates a plurality of sets of vibrations each of a fixed magnitude.

19. (Currently amended) The device of claim 14, wherein the selected magnitude comprises said device in said second mode generates vibration of a variable magnitude.

20. (Currently amended) The device of claim 19, wherein the selected magnitude varies in a linear, curvilinear, or step-like manner.

21. (Currently amended) The device of claim 14, wherein the selected frequency comprises said device in said second mode generates vibration at a fixed frequency.

22. (Currently amended) The device of claim 14, wherein the selected frequency comprises said device in said second mode generates a plurality of sets of vibration each at a fixed frequency.

23. (Currently amended) The device of claim 14, wherein the selected frequency comprises said device in said second mode generates vibration at a variable frequency.

24. (Previously presented) The device of claim 14, wherein the probe can be used to determine one or more of a vibration perception threshold, a vibration disappearance threshold, and a vibration threshold, the device further comprising audio or visual display to indicate one or more of the vibration perception threshold, the vibration disappearance threshold, and the vibration threshold.

25. (Previously presented) The device of claim 24, further comprising at least one component for storing and/or processing data including one or more of the vibration perception threshold, the vibration disappearance threshold, and the vibration threshold.

26. (Currently amended) ~~An~~ A portable electronic communication device for detecting neuropathy in a subject, comprising:

a component for generating and displaying quantified vibration of a fixed or variable magnitude in a first mode of operation for use as part of a medical test of nerve function, the component further being adapted for generating vibration at a standard paging or beeping magnitude or frequency in a second mode of operation;

wherein when the first mode is selected and the device is applied to a subject, a threshold for the perception or disappearance of vibration can be determined as a measure of nerve function to detect the presence or absence of neuropathy; and

wherein when the second mode is selected the device ~~further~~ functions as a portable electronic device comprising one or more of a pager, beeper, and cellular phone.

27. (Canceled)

28. (Currently amended) A medical diagnosis method, comprising:
providing a portable multi-functional electronic communication and medical diagnostic device, the device comprising a component for generating vibration, the component being adapted to generate vibration in response to a remote wireless signal in a first mode when the device is operated as a ~~portable~~ an electronic communication device comprising one or more of a cellular phone, pager, and beeper, the component being further adapted to generate vibration in a second mode when the device is used for ~~use in a~~ medical diagnosis ~~in response to a signal generated by the device~~;
selecting the second ~~a~~ mode of vibration to be used in medical diagnosis;
generating vibration;
applying the device to a subject; and
diagnosing a medical condition based on detection or non-detection of vibration by the subject.

29. (Canceled)

30. (Original) The method of claim 28, further comprising: determining a threshold for the subject's ability to detect vibration by generating a predetermined magnitude or frequency.

31. (Original) The method of claim 30, wherein: the threshold is graded low if the subject detects vibration, and high if the subject cannot detect vibration.

32. (Original) The method of claim 28, further comprising: determining a vibration perception threshold for the subject's ability to detect vibration by increasing the magnitude or frequency of vibration.

33. (Original) The method of claim 32, wherein: the vibration perception threshold is graded low, medium, or high when compared to a preset standard thereby indicating the severity of the medical condition.

34. (Original) The method of claim 28, further comprising: determining a vibration disappearance threshold for the subject's ability to no longer detect vibration by decreasing the magnitude or frequency of vibration.

35. (Original) The method of claim 34, wherein: the vibration disappearance threshold is graded low, medium, or high when compared to a preset standard thereby indicating the severity of the medical condition.

36. (Original) The method of claim 28, wherein: the medical condition comprises neuropathy.

37. (Currently amended) The method of claim 36, wherein: the step of generating vibration b) comprises generating vibration of a predetermined magnitude or frequency equal to about 95th-97th percentiles in a normal population.

38. (Original) The method of claim 37, wherein: detection of vibration by the subject indicates an absence of neuropathy, and non-detection indicates a presence of neuropathy.

39. (Original) The method of claim 30, wherein: the magnitude or frequency is fixed.

40. (Original) The method of claim 30, wherein: the magnitude or frequency is variable in a linear, curvilinear, or step-like manner.

41. (Previously presented) The method of claim 36, wherein: the device is applied to an extremity of the subject.

42. (Currently amended) A method of detecting neuropathy in a subject, comprising:

providing a portable multi-functional electronic communication and medical diagnostic device, the device comprising a component for generating vibration, the component being adapted to generate vibration in response to a remote wireless signal in a first mode when the device is operated as ~~a portable~~ an electronic communication device comprising one or more of a cellular phone, pager, and beeper, the component being further adapted to generate vibration at one or more selected magnitudes or frequencies in a second mode when the device is used for ~~use in a medical diagnosis in response to a signal generated by the device~~;

selecting the second ~~a mode of vibration to be used in detecting neuropathy~~;

generating vibration of a predetermined magnitude or frequency as a threshold stimulus and applying the device to a subject; and

allowing the subject to indicate whether or not vibration can be detected;

determining ~~wherein~~ the absence or presence of neuropathy ~~is indicated~~ by the subject's ability to detect or not detect the vibration.

43. (Canceled)

44. (Original) The method of claim 42, wherein: the threshold stimulus is equal to about 95th – 97th percentiles in a normal population.

45. (Previously presented) The method of claim 42, wherein: the step of generating vibration comprises generating vibration of a fixed magnitude or frequency.

46. (Previously presented) The method of claim 42, wherein: the step of generating vibration comprises generating vibration of a variable magnitude or frequency.

47. (Original) The method of claim 46, further comprising: determining a vibration perception threshold for the subject's ability to detect vibration by increasing the magnitude or frequency of vibration.

48. (Original) The method of claim 47, wherein: the vibration perception threshold is graded low, medium, or high when compared to a preset standard thereby indicating the severity of neuropathy.

49. (Original) The method of claim 46, further comprising: determining a vibration disappearance threshold for the subject's ability to no longer detect vibration by decreasing the magnitude or frequency of vibration.

50. (Original) The method of claim 49, wherein: the vibration disappearance threshold is graded low, medium, or high when compared to a preset standard thereby indicating the severity of neuropathy.

51. (Currently amended) A medical diagnosis method, comprising:
providing a portable multi-functional electronic communication and medical diagnostic device, the device comprising a component for generating vibration, the component being adapted to generate vibration in response to a remote wireless signal in a first mode when the device is operated as a ~~portable~~ an electronic communication device comprising one or more of a cellular phone, pager, and beeper, the component being further adapted to generate vibration in a second mode when the device is used for use in a medical diagnosis in response to a signal generated by the device;
selecting the second ~~a mode of vibration for use in medical diagnosis~~;
applying the device to a subject and generating vibration; and
diagnosing a medical condition based on detection or non-detection of vibration by the subject.

52. (Canceled)

53. (Currently amended) A method of detecting neuropathy in a subject, comprising:

providing a portable multi-functional electronic communication and medical diagnostic device, the device comprising a component for generating vibration, the component being adapted to generate vibration in response to a remote wireless signal in a first mode when the device is operated as a ~~portable~~ an electronic communication device comprising one or more of a cellular phone, pager, beeper, the component being further adapted to generate vibration at one or more selected magnitudes or frequencies in a second mode when the device is used for ~~use in a medical diagnosis in response to a signal generated by the device;~~

selecting the second ~~a-mode of vibration for use in detecting neuropathy;~~

applying the device to a subject and generating vibration of a predetermined magnitude or frequency as a threshold stimulus; and

allowing the subject to indicate whether or not vibration can be detected;

determining ~~wherein~~ the absence or presence of neuropathy ~~is indicated by the~~ subject's ability to detect or not detect the vibration.

54. (Canceled)

55. (New) The device of claim 1, further comprising a selector for selecting the one or more frequencies of vibration in the second mode.

56. (New) The device of claim 1, further comprising a probe for transmitting vibration from the vibratory component to a subject.

57. (New) The device of claim 56, wherein the probe projects outwardly from device.

58. (New) The device of claim 1, wherein the device is adapted to be applied to several extremities of a subject, one extremity at a time, the extremities including: a finger, a toe, a tibia, a wrist, and a face.

59. (New) The device of claim 1, wherein the vibratory component comprises a motor for generating vibration, a vibrating head adapted to be applied to the extremity of a subject, and a shaft transmitting vibration from the motor to the vibrating head.

60. (New) The device of claim 59, wherein the motor is a DC motor and the shaft comprises an offset weight thereon.

61. (New) The device of claim 59, wherein the motor is a piezoelectric transducer.

62. (New) The device of claim 1, further comprising a mechanism for audibly indicating one or more of the magnitude of vibration and the frequency of vibration being generated by the vibratory component in the second mode.